

POLYAKOV, G. F.

SOKOLOV, Aleksandr Yakovlevich, professor; POLYAKOV, G.F., redaktor  
izdatel'stva; MATVEYEVA, Ye.N., tekhnicheskij redaktor

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RYAZANKIN, Vladimir Nikolayevich; YEVSTIGNEYEV, German Pavlovich;  
TRESBYATSKIY, Nikolay Nikolayevich [deceased]; DOBROGURSKIY,  
S.O., professor, doktor tekhnicheskikh nauk, redaktor; DOSTUPOV,  
B.G., kandidat tekhnicheskikh nauk, retsenzent; DOBROSMYSLOV, V.I.  
inzhener, retsenzent; ~~POLYAKOV, G.F., redaktor izdatel'stva;~~  
SOKOLOVA, T.F., tekhnicheskij redaktor

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Operating conditions in the Khayan-Kort oil field. Izv.vysluchet.zav.;  
neft' i gaz 7 no.4:51-54 '64. (MIRA 17:5)

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(Petroleum engineering)

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(Pipelines)

*Polyakov G. G.*

**AUTHOR:** Polyakov, G. G.

93-58-3-13/17

**TITLE:** Artificial Rock Fractures (Ob iskusstvennoy treshchinovatosti porody)

**PERIODICAL:** Neftyanoye khozyaystvo, 1958, Nr 3, pp 53-56 (USSR)

**ABSTRACT:** The author criticizes F. I. Kotyakhov's article "Approximation Method for the Evaluation of Natural and Artificial Rock Fractures," published in Neftyanoye khozyaystvo, 1957, Nr 3. Kotyakhov used Boussinesq's formula for determining fluid flow in the fracture, and his basic premise is similar to that of G. K. Maksimovich [Ref 2]. In view of this Kotyakhov should have obtained results similar to those of Maksimovich, but actually the results of the two scientists differ markedly. This is because Kotyakhov committed several serious errors. For instance, in calculating the radial fluid filtration through the fracture by the Dupuy formula, Kotyakhov relates filtration to the entire thickness of the formation and not to the height of the fracture and the total fluid consumption in the radius of the fracture which should have been expressed by Prof. G. N. Kamenskiy's formula is presented by an unsuitable formula. The author reprocessed the data and showed to what extent the above errors affected Kotyakhov's results (Tables 1-4). By using industrial

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95-58-3-13/17

Artificial Rock Fractures

data on hydraulic fracturing of wells belonging to the former State All-Union Association of the Groznyy Oil and Gas Industry (Grozneft'), the author shows the variance between the theoretical and actual values. The author's conclusion that Boussinesq's formula is unsuitable for determining the permeability of rock fractures was confirmed by laboratory experiments carried out by the All-Union Instrument Scientific Research Institute (VNIIT). The author sums up his criticism by stating that Kotyakhov's method of evaluating artificial rock fractures is incompatible with industrial data and cannot be used in planning hydraulic fracturing of oil formations. There are four tables and three Soviet references.

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1. Of the Institute of the Brain (Director -- Prof. S. A. Sarkisov, Active Member AMS USSR), Ministry of Public Health USSR.

POLYAKOV, G.I.

Some new data on early embryogenesis of the cerebrocortical neurons  
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(CEREBRAL CORTEX, embryology,  
\*early develop. of neurons in man)

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2234. (On the structural mechanisms of the interneuronal connections in the cortex of the brain of man. G. I. Polyakov *Vysk. Anat. Gist. Emdir.*, 1955, 32, 15-19 *Referat. Zh. Biol.*, 1956, Abstr. No. 77848.— Synapses in the cortex of the brain were studied with the aid of Lavdovski-Golgi's chrome-silver impregnation. It has been established that they are formed in a certain sequence by the axons (efferent synapses) as also by the dendrites (afferent). Axon synapses are produced by ramifications of the neurite and various forms of its endings. In places of contact all branches of fine axons bear tiny bead-like swellings, having in section the appearance of rings. Dendritic synapses are provided with lateral supplementary swellings having the appearance of little heads on legs. They grow diagonally or at right angles to meet the axon fibre-endings running past or approaching them and draw them to themselves. The lateral attachments represent a further type of complicated dendrites. Axon synapses are first found in the 6th and dendritic synapses in the 7th lunar month of embryonic life. These and others are developed intensively during the following months of intra-uterine life and particularly in the first month after birth, when a tremendous development of the most intimate connections between the neurones takes place. (Russian) I. P. HARDING

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5248. POLYAKOV G.I. \*Relations between the basic types of neurons in the cerebral cortex of man (Russian text) Z. VYSCH. NERV. DEJATEL. 1956, 8/3 (469-478) Graphs 2 Tables 2 Illus. 9 Efforent neurons (pyramidal and fusiform cells with long axon) and intercalated neurons (stellar cells with short axon) were counted in different cortical layers of

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cytoarchitectonic fields 3, 1, 2, 40 and 39. The number of cells is always greater in the superficial layers (II-IV) than in the deeper ones (V-VII), the ratio being 2:1 or 3:1. 71-79, 5-9 and 14-24% of the total number of cells in the cortical areas studied are of pyramidal, fusiform or stellar type respectively. Distribution of these 3 types of neurons in various cortical fields is shown graphically. The proportion of pyramids to stellar cells is relatively greater in the superficial layers (3-4 as compared with 10-11 in the deep layers). The number of stellar cells is particularly high at the level of dense afferent terminals in layer IV of field 3. The functional significance of these findings is discussed.

Bureš - Prague

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POLYAKOV, G.L., glavnyi mekhanik.

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1. Kirovskiy torfotrest.

(Tractors--Repairing)

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PA 65T37

USSR/Communications

Apr 1948

Telephony  
Telephones - Apparatus

"The Installation of High-Frequency Telephone Apparatus in Interblast Communications," G. L. Polyakov, Chief Engr, Smolensk Oblast Adm, Ministry of Communications, 1 p

"Vest Svyazi - Elektro-Svyaz'" No 4 (97)

Smolensk Oblast was hard hit by the Fascist invaders. As soon as the victorious Soviet Army drove out the enemy, communications personnel stepped in and began to rebuild the destroyed networks. Briefly describes some of the repair and recon-

65T37

USSR/Communications (Cont'd)

Apr 1948

struction work done. One of the greatest advancements was the installation of high-frequency telephone networks for interblast communications.

65T37

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1. Nachal'nik Smolenskogo oblastnogo upravleniya svyazi (for Polyakov).
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(Smolensk--Telecommunication) (Telecommunication--Smolensk)  
(Smolensk--Postal service) (Postal service--Smolensk)

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(Thermodynamics)  
(Iastrzhembsii, A.S.)

POLYAKOV, G.M., kand. tekhn. nauk; IL'IN, A.V., kand. tekhn. nauk; ZMACHINSKIY,  
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1. Saratovskiy avtomobil'no-dorozhnyy institut.  
(Boilers)

*Polyakov G. M.*

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Anilkin, Nikolay Aleksandrovich; Drobyshvskaya, Nadezhda Ivanovna; Dudinov, Vladimir Alekseyevich; Kon'kov, Arkadiy Sergeevich; Polyakov, Gleb Maksimovich

Spravochnik izobretatelya i ratsionalizatora (Inventor's and Innovator's Handbook) Moscow, Mashgiz, 1957. 702 p. 35,000 copies printed.

Ed.: Rozenberg, I. A., Candidate of Economic Sciences; Akhun, A. I., Konovalov, V. I., Peretts, V. B., Belinicher, I. Sh., Dubitskiy, G. M., Candidates of Technical Sciences; Konyukhov, S. M., Docent; Zakharov, B. P., Gektina, R. F., and Vakhomin, L. N., Engineers; Tech. Ed.: Sarafannikova, G. A.

PURPOSE: This handbook is intended for workers and foreman.

COVERAGE: The book contains information on processing, formulation, and justification of beneficial suggestions and inventions. It presents data on mathematics, mechanics, electrical engineering, hydraulics, and other technical branches of science, as well as data on the selection of machine

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## Inventor's and Innovator's Handbook

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building materials (properties and designation), the design of machine parts, and the technology of their manufacture. The tasks and rights of inventors and efficiency experts are discussed. The text is illustrated with examples of efficiency-promoting suggestions and typical calculations.

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